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## Innovative Financing for Enterprises

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**Abstract:**

*The industrial and innovative development of Kazakhstan accounts for the growth of the national economy. Although the return on investment in innovative business is quite high in the global financial market in general, individual investors may either get very high profits or lose all their invested funds, which is unacceptable for enterprises.*

*Therefore, it is especially important to define strategic approaches to reduce the potential loss ratio and increase the commercial success of innovation projects. For this purpose, it is necessary to properly and systematically form the financing sources of enterprises' innovative development, the effectiveness of which is confirmed by international and Kazakh experience.*

*On the other hand, it is important to determine directions and conditions for the use of these funds in the course of the innovation process, since the timely suspension or termination of the project will significantly reduce possible losses.*

**Keywords:** Financing sources, innovation, cost of innovation, public financing.

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## **1. Introduction**

In the context of globalization, when it comes to a high technological level, the country faces the task of moving to economic growth through innovation. Reproduction within the framework of many economic systems becomes steadily intensive, based in each of its cycles on the use of new achievements in science and technology.

The process of expanded reproduction began to be identified with an innovative type of development, and this reproduction itself was called innovative. Without the introduction of an innovation system, it is impossible to form an effective structure of the economy and ensure its high competitiveness. The solution of this problem largely depends on the degree of activation of the innovation process, which directly depends on the degree of financing for the implementation of an effective innovation model of the economy. The financing of innovation-oriented industries based on advanced achievements in science and technology results in creating high value-added products that are in demand by consumers and gaining benefits from the globalization of the world economy.

Fundamental studies on economic and social aspects of innovative development as well as their impact on reproduction and investment processes were carried out by such researchers as Dezhkina and Potashkina (2010). The issues of financial and innovation management were considered in the works of Gaunova (2012), Molchanova and Surin (2008), Ogovlev (2013), Fatkhutdinov (2005) and Shokhina (2011). The financial system and financial regulation were analyzed by Zeynelgabdin (2005) and Melnikov (2005). The questions of project management as well as the features of financing innovation projects were studied in the works of Zub (2016) and Sultanov (Features of innovation project financing). Therefore, it can be noted that in the last decade research developments on the problems of innovative development, financing of enterprises' innovative development, evaluation of innovation potential as well as its stimulation and optimization have significantly intensified.

## **2. Results**

The financing source is a resource base for financing the activities of an organization, which includes (Shokhina, 2011):

- financing at the expense of profits, accounts payable and the use of temporarily free financial resources;
- public financing;
- equity financing;
- loans;
- venture financing;
- leasing;

- forfeiting;
- mixed financing.

Analyzing each financing source of innovation in more detail, one can draw the following conclusion:

1. Financing of innovative activities can be carried out at the expense of the enterprise's generated profit, accounts payable and temporarily free financial resources. The advantages of this type of financing sources can include their relative free-of-charge and accessibility. Financing of innovative activities at the expense of profits is the most preferable, because it is less dependent on external factors. However, this financing source is not always available, since it is not always possible to provide profit in the volumes and terms that are necessary for the implementation of large innovation projects.

2. Public financing does not imply a momentary return on invested funds. It is aimed at supporting and developing certain priority areas for the state. As innovative activity is one of these areas, this type of financing is often used in the implementation of science intensive innovation projects.

Budgetary funds are allocated in the following forms (Surin and Molchanova, 2008):

- a) financing of public targeted innovation programs;
- b) financial support of promising innovation projects on a competitive basis.

The following requirements are imposed on innovation programs, the implementation of which involves public financial support (Loginov and Popov, 2004):

- the right to participate in competitive selection belongs to innovation projects aimed at developing promising (developing) sectors of the economy, subject to partial financing (at least 20% of the amount necessary for the project) from the company's own funds;
- the payback period should not exceed the established standards (2 years, as a rule);
- public financing of qualified innovation programs can be carried out at the expense of budgetary funds allocated on a return basis or on the terms of granting a part of the shares of the economic entity to public ownership;
- innovation programs provided for selection must be approved by public environmental expertise, public departmental or independent expertise.

The following main types of public budgetary allocations are applied (Budget Code of the Republic of Kazakhstan as of December 4, 2008):

- 1) grants and subsidies – financial resources are allocated for a specific project after an independent evaluation and do not require a return;
- 2) state guarantees – if the enterprise receives a bank loan for the implementation of a strategically significant project, the state can act as guarantor of this loan and undertakes to repay the debt in case of insolvency of the enterprise;
- 3) targeted loans – loans provided by the state for the implementation of significant projects on preferential terms (low interest rates and long repayment periods);
- 4) state order – financing the production of goods or services for public needs.

It should be emphasized that budget financing is a very attractive and competitive financing source for enterprises. The presence of this type of financing at the enterprise means certain financial stability and contributes to obtaining other types of financing, as it indicates the potential and importance of the business run by the enterprise for society.

The disadvantages of this type of financing include a rather complicated procedure for its obtaining, which limits its applicability to start-up or small enterprises.

If the enterprise has reached a certain stage of growth and already brings tangible revenues, a significant role in stimulating its further innovative development can be played by tax incentives established by the state and local authorities.

3. Equity financing, available for enterprises organized in the form of joint-stock companies, allows accumulating large financial resources by placing shares among an unlimited range of investors (borrowing money from share buyers for an indefinite period of time) for implementing promising innovation projects.

In addition, a financing source for investment and innovative activities may be the issuance of bonds aimed at attracting temporarily free cash assets of the population and commercial structures. The principal difference between bonds and shares is the fixed value of the former and their independence from the results of the enterprise's economic activity. Moreover, the owner of the bond has no ownership rights in relation to the enterprise that issued the bond.

The term of the bond loan, as a rule, should be no less than the average term of the investment project, so that the repayment of this loan would occur after receiving the return on invested funds (Zeynelgabdin, 2005). The disadvantages of this type of financing also include the complexity of implementation and its inaccessibility for small and medium-sized businesses.

4. Loans are one of the most common financing sources for growing sectors of the economy, especially in the early stages of enterprise development. Commercial banks finance innovation projects that have real payback periods (the payback period is shorter than the project implementation period) and sources for the return of provided financial resources that ensure a significant increase in invested capital. A

bank loan is granted for a certain period at interest rates, the amount of which depends on the loan term, the magnitude of the project risk, the characteristics of the borrower (Ogovlev, 2013).

The attraction of bank loans is often seen as the best method of external investment financing, if the enterprise cannot meet its needs at its own expense and issue. The advantages of this type of financing include its relative independence from the size of production or the volume of profit as well as the degree of share distribution. At the same time, there are a number of disadvantages: the requirement for collateralized debt, which, as a rule, is exposed by the bank in order to reduce the risk of lending; the need for periodic payments to repay the debt.

5. Venture financing holds a special place among financial sources for the implementation of innovation projects in the business sector. Venture investments are carried out in the form of acquiring a part of the shares of venture capital enterprises not yet listed on exchanges and providing loans in other forms. The purpose of this transaction is to ensure the growth of the value of the company's shares through the implementation of a prospective project and to profit from differences in the purchase or sale price of the shares.

Currently, the following forms of venture financing are the most developed (Melnikov, 2005):

- direct venture investment when there is a direct financing by the investor of the venture capital enterprise (venture);
- financing through venture funds.

Venture (innovative) funds are a kind of investment funds that are created at the expense of developers and consumers of innovative products, savings of the population and the state. Innovative funds can finance innovation projects on a grant (preferential) basis, accumulating and redistributing capital from multichannel sources to innovative activities. Innovative funds both finance innovation projects and provide financial assistance to innovative enterprises and individual scientists and specialists.

The risk associated with innovative financing is distributed among the various partners in proportion to their equity participation in the fund's capital. The likelihood of making a profit is increased due to the investment of the fund simultaneously in several innovation projects. The risk of venture investors is high, but in case of success, it is compensated by excess profits. Statistics show that in 15% of cases venture capital is completely lost, in 25% – ventures suffer losses for a longer period than planned, in 30% – they receive moderate profits, and in 30% – excess profits (excess of "risk capital" in 30-200 times) (Gorodnikova *et al.*, 2015).

In addition to financial and credit services, innovative funds provide a variety of intermediary services – information support, patent analysis of innovation projects, licensing, consulting, etc., which contributes to the formation of favorable conditions for the activities of innovators.

6. Leasing is a type of entrepreneurial activity aimed at investing temporarily free or attracted financial resources, in which the lessor under a financial lease undertakes to acquire property from a certain seller and give it to the lessee for a fee for temporary use for business purposes (Gazman, 2015). In terms of its economic content, leasing refers to productive investments, in the course of which the lessee must reimburse the lessor for investment costs incurred in material and monetary forms and pay compensation. The advantages of leasing over crediting are a wider range of services.

At the same time, the application of financial leasing schemes has a number of limitations. In particular, such schemes are not possible for all innovation projects. It should be borne in mind that the cost of purchased equipment, taking into account the bank's remuneration and insurance payments, may be too high, and its market price can significantly decrease during leasing for a variety of reasons (Dosymbekov, 2016).

7. Forfeiting is a transaction to transform a commercial loan into a bank loan. The essence of this transaction is that the buyer, who does not have the required amount of financial resources at the time of concluding the transaction, issues a set of bills to the seller for an amount equal to the value of the transaction object and interest for deferred payment, i.e. for the provision of a commercial loan (Law of the Republic of Kazakhstan of August 31, 1995).

8. Mixed financing is carried out by attracting financial resources necessary for the implementation of innovation projects from various sources.

9. Project financing of innovative activities often implies such type of financing organization, when the income received from the project is the only source of debt repayments (Zub, 2016).

A significant difference between venture and project innovative financing is that project financing is applied to those products for which commercial demand has already been formed.

There are several types of project innovative financing (Sultanov, Features of innovation project financing). The first type is financing, based on the viability of the project itself, without taking into account the creditworthiness of its participants, their guarantees and guarantees for the repayment of the loan by third parties. The second type is investment financing, in which the source of debt repayments are the cash flows generated as a result of the project. The third type is financing, in which

the cash flows generated as a result of the project and the assets of the enterprise serve as collateral for the loan. The fourth type of project financing is the provision of loans for the economic and technical viability of the enterprise itself.

The system of innovative financing, formulated in accordance with the State Program for Industrial and Innovative Development of the Republic of Kazakhstan for 2015-2019 (Loginov and Popov, 2004), involves the use of a variety of financing sources including direct public investment to implement innovation programs and projects of national importance, funds from non-state innovation support funds, loans of second-tier banks, own funds of enterprises, funds mobilized for an issuance of securities, as well as foreign investment (Table 1).

**Table 1.** *Costs of innovation by financing sources in 2016*

Name	Total	Enterpr ises' own funds	Republic an budget	including		Local budge t	Foreig n invest ment	Other funds
				develop ment instituti ons	includi ng			
					innovat ion grants			
Costs of innovat ion by financi ng sources	1 533 765,3	371 674,2	43 106,1	2 606,2	1 502,5	1 909,8	514 035,9	603 039,3
Costs of product and process innovat ion by financi ng sources	1 528 645,9	367 777,0	42 012,1	2 588,0	1 484,6	1 851,8	514 020,7	602 984,3
<b>Note:</b> Compiled by the authors based on data (Gorodnikova et al., 2015)								

According to Table 1, one should note a large share of costs from enterprises' own funds of the total cost, while the share of costs from the republican budget is only 2.8% of the total cost, with a 24.2% share of costs from enterprises' own funds of the total cost. In general, own funds are used by such large enterprises as PA "Balkhashtsvetmet", LLP "Karaganda Metal Products Plant", LLP "Corporation Kazakhmys", JSC "Karagandanerud", JSC "Mittal Steel Temirtau", JSC "Zhezkazgan Zholdary", JSC "Shubarkolkomir", LLP "Abai Casting and Mechanical Plant", JSC "ZHGO" and many others.

At the same time, the share of foreign investment in the implementation of innovative activities in Kazakhstan is large, as shown in Table 1. This negatively characterizes the position of the national economy in innovative development. On the one hand, there is a positive effect in the form of acquiring new technologies and licenses, on the other – this tendency causes the country's dependence on foreign technological developments as well as reduces skills for innovative activity of domestic business entities.

### **3. Discussion**

As noted above, based on the data presented in Table 1, financing sources for technological innovation include, first of all, enterprises' own funds as well as loans of second-tier banks and financial leasing. With regard to the fact that innovation projects are the most risky of investment ones, and enterprises still use the first financing option, due to the greater accessibility of loans of commercial banks rather than funds of development institutions created under the Program for Innovative Development of the Republic of Kazakhstan, there is a need to determine the effectiveness of the national innovation system.

Currently, one of the directions of state regulation of investment processes in the Republic of Kazakhstan is the creation of the following development institutions participating in the financial support of innovation processes: the Kazakhstan Investment Fund, the Development Bank of Kazakhstan, the National Innovation Fund, the Export Credit and Investment Insurance Corporation. The purpose of the established development institutions is to provide financial support to the private sector and government initiatives in the area of developing infrastructure projects and non-energy sectors of the economy. The problem here is that having such powerful development institutions in the country, entrepreneurs wishing to obtain affordable finances for business development, based on legislative acts that facilitate the launch of innovative projects, and possible know-how orders of the state, do not have these opportunities, since the scientific achievements of Kazakhstan are presented not in completed projects ready for business, but in drawings or design models. Unfortunately, this layer – the main bulk of the country's intellectual reserves – remains outside the innovation system for the time being.

In developed economies, such problems are solved by innovative managers, mediators between science and finance. In the US, about 10 managers per one researcher on average are involved. Kazakhstan has virtually no such specialists. This is one of the main reasons that many innovation projects do not reach development institutions. Currently, Kazakhstan's economy needs innovative managers capable of bringing the innovative idea to the stage of a full-fledged feasibility study and presenting it in this form to financiers in order to attract investment.



Until recently, there has been no cheap and affordable capital in Kazakhstan, which hampered the development of innovative business. The reason is that it is necessary to verify and patent the idea, launch production and find professional workers, which takes at least three years, during which one has to pay taxes and salaries as well as repay loans at a zero income rate. Under such conditions, it is unrealistic to be interested in investing in know-how.

To implement the innovation policy proclaimed by the state, venture financing has appeared with the fundamental support of the state itself, since private traders are not yet ready to take on innovative risks. The fund has its share, invests in the project and, in the event of its implementation, receives dividends. Kazakhstan venture funds within the framework of the national innovation system should only finance projects focused on new technologies. There is one significant problem – a different understanding of innovation: for venturers, it is primarily a company that is ready to present a new product, i.e. business, for scientists – a real development as a result of intellectual work. There is a contradiction that inhibits the interaction of business and science. Venture funds will invest money not in science, but in knowledge-intensive business. The main direction of venture funds is investing and attracting investments in companies that implement innovation projects as well as projects for transferring, borrowing and building advanced and innovative technologies.

It is possible to interest companies to introduce know-how by tax bonuses from the state. The proven practice of European countries suggests that investments in research and development are counted as tax deductions to the budget. The costs of science are deducted from income taxes.

The positive experience of foreign countries includes the implementation of public programs that provide for direct public financing of research and development projects that have passed the relevant expertise and recognized as state-owned. According to the results achieved, large rewards and bonuses are paid. In addition, not only the state stimulates the innovation process, but also various investment funds allocate substantial grants to innovators. In Kazakhstan, all this is still at the initial stage. Despite the significant scale of measures taken in recent years to support enterprises' innovative activities, the key issues remain unaddressed:

- 1) insufficient stimulation of the transfer of advanced technologies;
- 2) inefficiency of mechanisms for solving and searching for priority technological tasks of enterprises and businesses;
- 3) low level of the business's susceptibility to technological innovations;
- 4) lack of technological and managerial competencies;
- 5) underdevelopment of innovative technologies in the education system;
- 6) inadequacy of the control system for the implementation of innovation projects.

In addition, the factors hampering the financing of enterprises' innovative activities include insufficient adherence to the principle of systematicity. This refers to the need to observe a certain proportionality of the innovation and production spheres. Innovation policy often does not take into account the fact that the main subject in the innovation process is enterprises. In the national program for the formation and development of the national innovation system, little attention has been given to the conditions for the emergence of innovative-active enterprises. The domestic economy has a small number of innovative enterprises, and there are practically no large economic structures in this area.

#### **4. Conclusion**

Although the analysis of indicators of the country's innovative development determined some positive trends in the development of the national innovation system (an increase in the cost of research and development in absolute terms, an increase in the number of research and development organizations), the low indications of research financing in relation to GDP as well as the weak innovative activity of enterprises can be observed. It follows that currently, the national innovation system of Kazakhstan is only passing through the stage of formation.

There are still no strong ties between its elements, or they exist isolated from each other. There is a lack of the active participation of business in research and development, which results in the low innovative activity of enterprises. The innovative development of Kazakhstan occurs in the conditions of underdeveloped private capital that could be used to develop and master the latest technologies, as it happens in developed countries. The innovative development of Kazakhstan should be based on the ongoing innovation policy and the legislation of the Republic of Kazakhstan, taking into account the economic characteristics of the regions and enterprises of various fields of activity. The main instruments of innovation policy should be aimed at consolidating the efforts of business and the state to develop priority sectors of the economy as well as establishing effective institutions and mechanisms for their interaction.

It is necessary to develop those forms of promotion of enterprises' activities that will strengthen their positions and satisfy the needs and interests of domestic macro-entities. The change of the model of economic development should be connected with the adjustment of the system of state administration of the entire process of expanded reproduction, starting from the stage of the scientific and technical preparation of reproduction and ending with final consumption. In this regard, it is necessary to strengthen the factors of innovative growth through the development of an effective mechanism of legislative, tax and financial support for innovation processes. Moreover, if companies wishing to run an innovation business do not receive a "tax break" for the period of development of new technologies (3-5 years) and an exemption from customs duties on imported technological and auxiliary equipment, a breakthrough in innovative activities will hardly be possible. This stage

is a major structural turn of Kazakhstan's economy taking into account the current trends in the world economy. In this case, the effect of the "innovative multiplier" should work, which will allow the use of a set of potentially possible scientific, technological and institutional innovations that help create a self-sufficient economy.

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